

Guzzling Gas, Prowler-Style



Senior Airman Greg L. Davis

by LCdr. Clark Troyer

Our crew had briefed for a night section event off the carrier. Our mission was to work a time-critical targeting timeline, then come back to get a night trap for currency on a moonless night. The ship was in the eastern Mediterranean, and our closest divert was in Israel.

We were shot off into the black and joined overhead. We then pressed west to set up for

a couple of runs, using mother as our target. The mission entailed two high-speed runs, which wasn't a problem, since we had a full bag of gas and only a 1+15 cycle. After the first run as the jammer, we reset and set up as the striker. We got a good fuel check, well above ladder at 13.6. All the gauges and tapes were normal as we pressed on our timeline for the second TOT.

Less than five minutes into the run, a NORDO Hornet became an issue on the strike frequency. We were asked to stop our run and try to find the Hornet, which wasn't squawking and was somewhere overhead Mother. Not the ideal mission for a Prowler crew—we don't have an air-to-air radar, and the controllers believed the Hornet might also be midnight because of an electrical failure. Just as we knocked it off, we heard that the Hornet's playmate had him on radar, and we decided to keep our nose out of the equation.

I looked down to quickly check fuel and tapes. Hold it—what did I call the state a few minutes ago, 13.6? Why was the fuel gauge showing 8.9 and decreasing? Must be something wrong with the gauge. Much to my chagrin, the gauge was accurate, and our fuel state was ticking down, passing 8,500 pounds. The wing dumps and fuselage dumps were definitely off, and with a visual check, we confirmed there was nothing coming out of the wings. Time for the good old uncommanded-loss-of-fuel checklist, one of many emergencies you hope you never have to experience, especially at sea.

Two quick boldface steps: "tank-pressurization switch off" and "land as soon as

e possible.” The tank-pressurization switch was off, and the fuel was still ticking down, passing 8,000 pounds. My right-seater (ECMO 1), who was also the skipper (which was nice, since I didn’t have to explain this one to him later in the ready room), had already pulled out the checklist and started at step one, just as we had briefed. We double-checked that the pressurization switch was off and the TACAN needle was on the nose. We had 40 miles back to mother. Our divert wasn’t an issue, since it was another 80 miles past the carrier.

Step three, apply positive and negative G’s. No joy, the gauge was still ticking down. Step four, fuselage dump switch to dump, then norm. Fuel passing through 7,300 pounds. The next step was to pull the fuselage-dump circuit breaker. Fuel was passing through 7,000 pounds, with 6,400 pounds in the main bag. The final step was to burn down to 2,000 pounds in the fuselage, then transfer fuel out of the wings at 1,500-pound increments. Not an issue, since we only had around 600 pounds left in the wings. ECMO 1 contacted marshal and requested an immediate landing. Marshal asked a few questions, including if we wanted vectors to the tanker. The skipper emphatically stated, “We need to land now!” and no more questions were asked. The ship’s controllers did a good job setting us up for a short hook. As we descended and set up on the downwind, it looked like the fuel had stopped decreasing at the unusually high rate and stabilized out at 6,200 pounds. The pucker factor started to decrease, and we got a chance to knock out our approach to landing checks. The rest of the approach was uneventful. We landed with plenty of gas, and paddles was generous with an OK 2-wire.


After we shut down and debriefed maintenance, we had a chance to catch our breath and sort out everything that had happened over the last 15 minutes of the flight. It had seemed like an eternity. We definitely hadn’t had fuel

coming out of the wing dumps, and when we turned inbound, we tried to see if fuel was coming out the fuselage dump mast on the tail—not an easy thing to see on a dark night. The wing fuel appeared to be dumping directly from the fuselage fuel-vent outlet in the tail, because a non-modulating pilot-valve had failed. All the steps in the checklist had no effect, and the dumping only stopped when the wing tanks were empty. The fuselage was lower than normal (around 6,500 pounds) because we were at max thrust during the training and while heading back to Mother at max speed. The wings dumped at more than 1,200 pounds per minute, which appeared to be consistent with our fuel loss.

Even though you may have done a thousand fuel and tape-gauge checks that are uneventful, the one you miss can put you in a box. It took less than five minutes for us to lose more than 4,000 pounds of fuel.

Know your NATOPS. The checklists may not cover every situation, but a thorough knowledge of each system gives you the best opportunity to handle an emergency.

Crew coordination is paramount in all multi-place cockpits. We had three people in the aircraft to fly the aircraft, read through the checklists, and handle the communications. Briefing the responsibilities of each member was an enormous benefit and time-saver.

Be directive with your controllers. You have the best understanding of your current problem, so don’t let someone talk you out of your plan. The basics were instilled in us early in our careers for a good reason. 

LCdr. Troyer is attached to the CVW-7 staff; he was flying with VAQ-140 during this incident.